

WHAT IS CLAIMED IS:

1 1. A method for executing a graph having components with parameters, including:

- 5w2
A13
- 2 (a) retrieving a runtime parameter for the graph at runtime execution of the graph, the
 - 3 runtime parameter having a value defined as determinable at runtime execution of
 - 4 the graph;
 - 5 (b) determining whether the value for the runtime parameter is to be provided by user
 - 6 input;
 - 7 (c) displaying a prompt to a user for receiving user input for every runtime parameter so
 - 8 determined;
 - 9 (d) determining a first final parameter value based on user response to such prompt; and
 - 10 (e) executing the graph using the first final parameter value as the value for the runtime
 - 11 parameter.

1 2. The method of claim 1, further including:

- 2 (a) determining whether the value for the runtime parameter is to be externally supplied
- 3 programmatically; and
- 4 (b) retrieving any externally supplied value for every runtime parameter so determined;
- 5 (c) determining a second final parameter value based on such externally supplied value;
- 6 and
- 7 (d) executing the graph using the second final parameter value as the value for the
- 8 runtime parameter.

1 3. The method of claim 1, further including providing an interface which permits

2 designating a parameter of a graph component as a runtime parameter.

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- method of claim 1, wherein
ing an expression.
- method of claim 4, wherein t
- method of claim 2, wherein
ing an expression.
- method of claim 6, wherein t
- method of claim 2, wherein
ing the prompt depends up

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- 1 9. A method for modifying a graph at runtime execution of the graph, including:
- 2 (a) determining at runtime execution of the graph whether any component of the graph
- 3 is defined as being a conditional component having a condition and a condition-
- 4 interpretation;
- 5 (b) evaluating the condition for every such conditional component; and
- 6 (c) modifying the graph at runtime execution of the graph in accordance with such
- 7 evaluation and the corresponding condition-interpretation of such conditional
- 8 component.
- 1 10. The method of claim 9, wherein modifying the graph includes removing the conditional
- 2 component and all connected flows to such conditional component from the graph before
- 3 execution of the graph based on a first evaluation of the condition and the corresponding
- 4 condition-interpretation for such conditional component.
- 1 11. The method of claim 10, further including removing each component and flows
- 2 connected to such components that depend on the presence of the conditional component.
- 1 12. The method of claim 9, wherein modifying the graph includes replacing the conditional
- 2 component with a flow before execution of the graph based on a second evaluation of the
- 3 condition and the corresponding condition-interpretation for such conditional component.
- 1 13. The method of claim 9, further including providing an interface which permits
- 2 designating a condition and a condition-interpretation for a graph component.
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1 14. A system for executing a graph having components with parameters, including:

- 2 (a) means for retrieving a runtime parameter for the graph at runtime execution of the
3 graph, the runtime parameter having a value defined as determinable at runtime
4 execution of the graph;
5 (b) means for determining whether the value for the runtime parameter is to be provided
6 by user input;
7 (c) means for displaying a prompt to a user for receiving user input for every runtime
8 parameter so determined;
9 (d) means for determining a first final parameter value based on user response to such
10 prompt; and
11 (e) means for executing the graph using the first final parameter value as the value for
12 the runtime parameter.

1 15. The system of claim 14, further including:

- 2 (a) means for determining whether the value for the runtime parameter is to be
3 externally supplied programmatically; and
4 (b) means for retrieving any externally supplied value for every runtime parameter so
5 determined;
6 (c) means for determining a second final parameter value based on such externally
7 supplied value; and
8 (d) means for executing the graph using the second final parameter value as the value
9 for the runtime parameter.

1 16. The system of claim 14, further including an interface which permits designating a
2 parameter of a graph component as a runtime parameter.
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1 17. The system of claim 14, wherein the means for determining the first final parameter value
2 includes means for evaluating an expression.

1 18. The system of claim 17, wherein the expression computes metadata.

1 19. The system of claim 15, wherein the means for determining the second final parameter
2 value includes means for evaluating an expression.

1 20. The system of claim 19, wherein the expression computes metadata.

1 21. The system of claim 15, wherein a prompt for receiving user input is conditional, and
2 displaying the prompt depends upon evaluation of user input to a prior displayed prompt.
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1 22. A system for modifying a graph at runtime execution of the graph, including:

- 2 (a) means for determining at runtime execution of the graph whether any component of
3 the graph is defined as being a conditional component having a condition and a
4 condition-interpretation;
5 (b) means for evaluating the condition for every such conditional component; and
6 (c) means for modifying the graph at runtime execution of the graph in accordance with
7 such evaluation and the corresponding condition-interpretation of such conditional
8 component.

1 23. The system of claim 22, wherein the means for modifying the graph includes means for
2 removing the conditional component and all connected flows to such conditional
3 component from the graph before execution of the graph based on a first evaluation of the
4 condition and the corresponding condition-interpretation for such conditional component.

1 24. The system of claim 23, further including means for removing each component and flows
2 connected to such components that depend on the presence of the conditional component.

1 25. The system of claim 22, wherein the means for modifying the graph includes means for
2 replacing the conditional component with a flow before execution of the graph based on a
3 second evaluation of the condition and the corresponding condition-interpretation for
4 such conditional component.

1 26. The system of claim 22, further including an interface which permits designating a
2 condition and a condition-interpretation for a graph component.
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1 27. A computer program, stored on a computer-readable medium, for executing a graph
2 having components with parameters, the computer program comprising instructions for
3 causing a computer to:

- 4 (a) retrieve a runtime parameter for the graph at runtime execution of the graph, the
5 runtime parameter having a value defined as determinable at runtime execution of
6 the graph;
7 (b) determine whether the value for the runtime parameter is to be provided by user
8 input;
9 (c) display a prompt to a user for receiving user input for every runtime parameter so
10 determined;
11 (d) determine a first final parameter value based on user response to such prompt; and
12 (e) execute the graph using the first final parameter value as the value for the runtime
13 parameter.

1 28. The computer program of claim 27, further including instructions for causing the
2 computer to:

- 3 (a) determine whether the value for the runtime parameter is to be externally supplied
4 programmatically; and
5 (b) retrieve any externally supplied value for every runtime parameter so determined;
6 (c) determine a second final parameter value based on such externally supplied value;
7 and
8 (d) execute the graph using the second final parameter value as the value for the
9 runtime parameter.

1 29. The computer program of claim 27, further including instructions for causing the
2 computer to provide an interface which permits designating a parameter of a graph
3 component as a runtime parameter.

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1 35. A computer program, stored on a computer-readable medium, for modifying a graph at
2 runtime execution of the graph, the computer program comprising instructions for
3 causing a computer to:

4 (a) determine at runtime execution of the graph whether any component of the graph is
5 defined as being a conditional component having a condition and a condition-
6 interpretation;

7 (b) evaluate the condition for every such conditional component; and

8 (c) modify the graph at runtime execution of the graph in accordance with such
9 evaluation and the corresponding condition-interpretation of such conditional
10 component.

1 36. The computer program of claim 35, wherein the instructions for causing the computer to
2 modify the graph include instructions for causing the computer to remove the conditional
3 component and all connected flows to such conditional component from the graph before
4 execution of the graph based on a first evaluation of the condition and the corresponding
5 condition-interpretation for such conditional component.

1 37. The computer program of claim 36, further including instructions for causing the
2 computer to remove each component and flows connected to such components that
3 depend on the presence of the conditional component.

1 38. The computer program of claim 35, wherein the instructions for causing the computer to
2 modify the graph include instructions for causing the computer to replace the conditional
3 component with a flow before execution of the graph based on a second evaluation of the
4 condition and the corresponding condition-interpretation for such conditional component.

1 39. The computer program of claim 35, further including instructions for causing the
2 computer to provide an interface which permits designating a condition and a condition-
3 interpretation for a graph component.